UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,891	01/06/2001	Arif A. Merchant	10004029-1	4110

7590   04/01/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO   80527-2400

EXAMINER
ZHEN, WEI Y

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2"></td><td colspan="2" align="center">Application No.
09/755,891</td><td align="center">Applicant(s)
MERCHANT ET AL.</td></tr>
</table>

	Application No.	Applicant(s)
Office Action Summary	09/755,891	MERCHANT ET AL.
	Examiner	**Art Unit**
	Wei Y Zhen	2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-48 are pending.

2.   The previous final rejection (paper no. 7, 12/19/2003) is now withdrawn in view of

applicant's remark filed on 3/19/2004.

3.   Claims 1-4, 13, 28, 31, 32, 35, 36 are now finally rejected under 35 U.S.C. 103(a) as

being unpatentable over Dolby et al, U.S. Patent No. 5,630,025 in view of DuLac et al, U.S.

Patent No. 6,023,754 (note that Applicant's amendment filed on 10/21/2003 necessitated the new

ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE**

FINAL).

4.   Claims 5-10, 12, 14-24, 26, 27, 29, 30, 33-34, 37-48 are now finally rejected under 35

U.S.C. 103(a) as being unpatentable over Dolby et al, U.S. Patent No. 5,630,025 in view of

DuLac et al, U.S. Patent No. 6,023,754 further in view of Motoyama et al, U.S. Patent No.

6,578,090 (note that Applicant's amendment filed on 10/21/2003 necessitated the new ground(s)

of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**).

5.   Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolby

et al, U.S. Patent No. 5,630,025 in view of DuLac et al, U.S. Patent No. 6,023,754 further in

view of Motoyama et al, U.S. Patent No. 6,578,090 and Lebee, U.S. Patent No. 6,108,744 (note

that Applicant's amendment filed on 10/21/2003 necessitated the new ground(s) of rejection

presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
>
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
>
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
>
> manner in which the invention was made.

Claims 1-4, 13, 28, 31, 32, 35, 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Dolby et al, U.S. Patent No. 5,630,025 in view DuLac et al, U.S. Patent No.

6,023,754.

As per claim 1, Dolby et al discloses configuring a data storage system, using a high-

level language description to configure the data storage system (col. 2 lines 30-34, col. 7 lines

25-42).

Dolby et al does not explicitly disclose the data storage system is a disk array.

However, DuLac et al discloses configuring a disk array (col. 2 lines 30-35).

Therefore, it would have been obvious to one having ordinary skill in the art to

incorporate the teaching of DuLac et al into the teaching of Dolby et al to have the data storage

system to be a disk array because one would want to be able to provide rapid data storage and

retrieval and high levels of storage capacity.

As per claim 2, Dolby et al discloses the high level language specifies configuration goals

(col. 4 lines 24-29).

As per claim 3, Dolby et al discloses the high level language description includes a

declarative language (col. 4 lines 51-55).

As per claim 4, Dolby et al discloses the high-level language includes generic configuration commands (col. 4 lines 30-51).

Claim 13 is rejected for the reasons et forth in the rejection of claims 1 and 2.

As per claim 28, Dolby et al disclose high level language description specifies how data storage stores data (col. 8 lines 11-52).

Dolby et al does not explicitly disclose the data storage is a disk array.

DuLac et al discloses a disk array (col. 2 lines 30-35).

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching of DuLac et al into the teaching of Dolby et al to have the data storage system to be a disk array because one would want to be able to provide rapid data storage and retrieval and high levels of storage capacity.

As per claim 31, the rejection of claim 1 is incorporated and further Dolby et al discloses a high-level language description (col. 2 lines 30-34). Dolby does not explicitly disclose descriptions includes RAID level, stripe size and cache page size. However, RAID level, stripe size and cache page size were well known description of disk array at the time the invention was made. Therefore, it would have been obvious to one having ordinary skill in the art to have the description to include RAID level, stripe size and cache page size because one would want to configure the disk array properly.

As per claim 32, the rejection of claim 1 is incorporated and further Dolby et al discloses generating a high level language description (col. 2 lines 30-34).

As per claims 35, 36, the rejection of claim 13 is incorporated and further it is rejected for the reason set forth in the rejection of claims 31, 32 respectively.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-10, 12, 14-24, 26, 27, 29, 30, 33-34, 37-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolby et al, U.S. Patent No. 5,630,025 in view of DuLac et al, U.S. Patent No. 6,023,754 further in view of Motoyama et al, U.S. Patent No. 6,578,090.

As per claim 5, Dolby et al does not disclose explicitly the high-level language description includes device/host-independent commands.

However, Motoyama et al discloses the high-level language description includes device/host-independent commands (col. 2 lines 31-35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Motoyama et al into the teaching of Dolby et al to have the high-level language description includes device/host-independent commands. The modification would be obvious because one of ordinary skill in the art would be motivated to provide efficient method to use the description for various types of systems.

As per claim 6, Dolby et al does not disclose explicitly translating the high-level language description into device/host specific commends.

However, Motoyama et al discloses translating the high-level language description into device/host specific commends (col. 2 lines 31-35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Motoyama et al into the teaching of Dolby et al to translate the high-level language description into device/host specific commends. The modification would be obvious because one of ordinary skill in the art would be motivated to provide efficient method to use the description for various types of systems.

Claim 7 is rejected for the reason set forth in the rejection of claim 6.

As per claim 8, Dolby et al does not disclose explicitly that the high-level language description is translated into device/host independent commands and the device/host independent commands are translated into device/host specific commands.

Official Notice is taken that the high-level language description is translated into device/host independent commands and the device/host independent commands are translated into device/host specific commands were well known in the art at the time the invention was made.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of the well known knowledge into the system of Motoyama et al and Dolby et al to have the high-level language description be translated into device/host independent commands and the device/host independent commands be translated into device/host specific commands The modification would be obvious because one of ordinary skill in the art would be motivated to provide efficient method to use the generic device/host independent command for various types of systems.

Claim 9 is rejected for the reason set forth in the rejection of claim 8.

As per claim 10, Dolby et al does not explicitly disclose performing rule checking as claimed.

Official Notice is taken that performing rule checking was well known in the art at the time the invention was made.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of the well known knowledge into the system of Motoyama et al and Dolby et al to perform the rule checking. The modification would be obvious because one of ordinary skill in the art would be motivated to provide efficient method to ensure an correct and accurate configuration.

As per claim 12, Dolby et al does not explicitly disclose translating....into device specific queries, and generating commands from responses to the queries.

Official Notice is taken that translating....into device specific queries, and generating commands from responses to the queries was well known in the art at the time the invention was made.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of the well known knowledge into the system of Motoyama et al and Dolby et al to translate....into device specific queries, and generate commands from responses to the queries. The modification would be obvious because one of ordinary skill in the art would be motivated to provide efficient method to generate configuration commands that is tailored to meet the requirement of the specific system.

As per claim 14, Dolby et al and Motoyama et al do not explicitly disclose sending...to a host as claimed.

Official Notice is taken that sending...to a host as claimed was well known in the art at the time the invention was made.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of the well known knowledge into the system of Motoyama et al and Dolby et al to send...to a host as claimed. The modification would be obvious because one of ordinary skill in the art would be facilitates the communications between various types of systems.

Claim 15 is rejected for the reason set forth in the rejection of claim 8.

As per claim 16, Motoyama et al disclose executing the device/host specific commands to configure the data storage device (col. 2 lines 31-35, note that the machine language are inherently executed).

Claims 17, 18, 21, 22, 23, 24, 26 are rejected for the reason set forth in the rejections of claims 11, 10, 5, 7, 8, 10, 12 respectively.

As per claim 19, Dolby et al disclose high level language description specifies how data storage stores data (col. 8 lines 11-52).

Dolby et al and Motoyama et al do not explicitly disclose a disk array.
DuLac et al discloses a disk array (col. 2 lines 30-35).

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching of DuLac et al into the teaching of Dolby et al and Motoyama to have the data storage system to be a disk array because one would want to be able to provide rapid data storage and retrieval and high levels of storage capacity.

Claim 20 is rejected for the reasons set forth in the rejection of claim 5 and further the configuration commands inherently used to set data storage parameters in the data storage system.

Claim 27 is rejected for the reason set forth in the rejection of claims 1 and 6 and 20.

As per claim 29, the rejection of claim 6 is incorporated and further Motoyama et al disclose converting the specific commands into signals, and sending the signals to the disk array, whereby the signals cause the disk array to set parameters specified by the signal (col. 2 lines 31-35, note that signal inherently caused the disk array to be configured (cause the disk array to set parameters specified by the signal)).

As per claim 30, the rejection of claim 29 is incorporated and further Motoyama et al disclose performing a host configuration on the disk array (col. 2 lines 31-35, note that signal inherently caused the disk array to be configured).

Claims 33-34 are rejected for the reason set forth in the rejection of claims 29-30 respectively.

Claim 37, 38, 39, 40 are rejected for the reason set forth in the rejection of claims 29, 30, 31, 32 respectively.

Claims 41, 42, 43 are rejected for the reason set forth in the rejection of claims 29, 31, 32 respectively.

Claims 44, 45, 46, 47, 48 are rejected for the reason set forth in the rejection of claims 7, 10, 11, 9, 26 respectively.

8.   Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolby et al, U.S. Patent No. 5,630,025 in view of DuLac et al, U.S. Patent No. 6,023,754 further in view of Motoyama et al, U.S. Patent No. 6,578,090 and Lebee, U.S. Patent No. 6,108,744.

As per claim 11, Dolby et al, Dulac et al and Motoyama et al don't explicitly disclose specific commands are generated only for device/host parameter that should be changed.

However, Lebee disclose specific commands are generated only for device/host parameter that should be changed (col. 3 lines 45-60).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Lebee into the system of Motoyama et al, DuLac et al, and Dolby et al to have specific commands be generated only for device/host parameter that should be changed. The modification would be obvious because one of ordinary skill in the art would be motivated to provide efficient method to reduce the times associated with generating host specific commands by reusing generic commands.

Claim 25 is rejected for the reason set forth in the rejection of claim 11.

Response to Arguments

9.   Applicant's arguments filed on 10/21/2003 have been fully considered but they are not persuasive.

In the remark, applicant has argued that

1)   Dolby et al do not disclose a disk array, nor do they teach or suggest how their system can be used to configure a disk array.

Response:

1)   Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. DuLac et al is not cited to disclose the configuration of a disk array.

applicant has argued that

2)   Montoyama et al do not teach a disk array, nor do they teach or suggest how Dolby et al

system can be used to configure a disk array.

Response:

2)   Applicant's arguments have been considered but are moot in view of the new ground(s)

of rejection. DuLac et al is now cited to disclose the configuration of a disk array.

applicant has argued that

3)   Neither Dolby et al nor Montoyama et al teach or disclose accessing a high level

description that specifies how a data storage device store data.

Response:

3)   Dolby et al clearly discloses configuring a data storage system (col. 8 lines 10-45, "the

configurator contain a database called the knowledge base...the contents of the knowledge

base..defines the type of constructor that may be manipulated by the configurator")

applicant has argued that

4)   Neither Dolby et al nor Montoyama et al teach or suggest processing a high-level

language description into configuration commands that can be used to set data storage

parameters in a data storage system.

Response:

4)   Dolby et al and Montoyama et al clearly disclose processing a high-level language

description into configuration commands that can be used to set data storage parameters in a data

storage system (see the rejection to claim 20 above).

applicant has argued that

5)   Neither Dolby et al nor Montoyama et al teach or suggest translating a high-level

language description into specific commands that can be used to set data storage parameters in a

data storage device.

Response:

5)   Dolby et al and Montoyama et al clearly disclose translating a high-level language

description into specific commands that can be used to set data storage parameters in a data

storage device (see the rejection to claim 27 above).

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

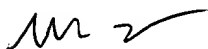will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wei Y Zhen whose telephone number is (703) 305-0437. The

examiner can normally be reached on Monday-Friday, 8 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Dam can be reached on (703) 305-4552. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wei Zhen
Primary Examiner
3/29/2004